

> Step 1

a) Given data:

Number of drives = 1000.

Hours/Drive = 8760

Hours/failure = 1000000

Annual failure rate (AFR) = ?

> Step 2

$$\text{Annual failure rate (AFR)} = \frac{\text{Number of drives} \times \text{Hours/Drive}}{\text{Hours/failure}}$$

$$= \frac{1000 \times 8760}{1000000}$$

$$= \frac{8760000}{1000000}$$

$$\boxed{\text{Annual failure rate (AFR)} = 8.76\%}$$

> Step 3

b) Given data:

Number of drives = 1000.

Hours/Drive = 10512

Hours/failure = 1500000

Annual failure rate (AFR) = ?

> Step 4

$$\begin{aligned}\text{Annual failure rate (AFR)} &= \frac{\text{Number of drives} \times \text{Hours/Drive}}{\text{Hours/failure}} \\ &= \frac{1000 \times 10512}{1500000} \\ &= \frac{10512000}{1500000}\end{aligned}$$

$$\boxed{\text{Annual failure rate (AFR)} = 7.008\%}$$